

## ABSTRACT

A process for detecting an aluminum-based material deposited onto a titanium-based gas turbine engine component during engine operation is disclosed. The process comprises immersing at least a portion of the titanium-based component, which has been subjected to engine operation, into an acid solution to form an etched component. The acid solution comprises sodium fluoride, sulphuric acid and water. The etched component may then be removed from the solution and visually inspected for dark areas in contrast to light areas, the dark areas indicating deposited aluminum-based material.